Draft Environmental Assessment for an Experimental Removal of Lake Trout in Swan Lake, Montana

June 3, 2009



Cover Sheet

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Proposed Action: Montana Fish, Wildlife & Parks (FWP) proposes to conduct a 3-year removal effort of lake trout in Swan Lake, Montana. The proposed action would involve contracting with professional fishery consultants to conduct gill netting over a 3-week period beginning late August or early September 2009. Additionally, FWP personnel will remove spawning adult lake trout during the months of October and November by gill netting along known lake trout spawning sites. These activities would be conducted annually for three years. Funding has been secured for the first two years of the project, and is being pursued for the third. Obtaining the final year of funding will likely depend on the relative success of the first two years of the project. Information obtained from the proposed action will help to determine feasibility and effectiveness of alternatives for managing the lake trout population (e.g., suppression of the population). All lake trout sampled during the project will be culled; those that are salvageable and of suitable size for consumption will be field dressed and donated to food banks or other facilities.

Lead Agency:

Montana Fish, Wildlife & Parks

Responsible Official:

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Comment Period:

The public comment period will be through Wednesday, July 8, 2009. A public meeting is scheduled for Wednesday, July 1, 7:00-9:00 p.m. at the US Forest Service Office, 200 Ranger Station Road, Bigfork, Montana. Comments may be e-mailed to lrosenthal@mt.gov or written comments may be sent to the following address:

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1.0 Purpose of and Need for Action

A. Proposed Action

Montana Fish, Wildlife & Parks (FWP), and Partners [US Fish and Wildlife Service (USFWS), US Forest Service (USFS), Montana State University Cooperative Fisheries Research Unit, Montana Trout Unlimited, Confederated Salish and Kootenai Tribes (CSKT), and the Montana Department of Natural Resources and Conservation (DNRC)] propose to conduct a 3-year removal effort for lake trout *Salvelinus namaycush* in Swan Lake, Montana, to minimize their impact on other fisheries. This 3-year effort will involve using a variety of equipment over varied time periods, to remove as many lake trout as possible, while minimizing mortality of non-target species. Gill nets will be the predominant gear deployed, although the mesh size and timing of deployment will vary in relation to the age class of lake trout targeted. Due to the numbers of fish to be handled, we propose to utilize the skills, equipment, and expertise of professional fishery consultants. A research project conducted in the fall of 2008 resulted in 3,487 lake trout being removed. This effort will likely result in similar if not greater numbers of lake trout being removed annually.

1. Funding

The project is anticipated to cost between \$50,000 and \$70,000 annually. Funding will be through FWP with contributions from the Partners. Funding has been secured for the first two years of the project and is being pursued for the third. Obtaining the final year of funding will likely depend on the relative success of the first two years of the project. Likewise, initiating the third year will depend on obtaining adequate funding.

2. Estimated Time Line

The project is anticipated to begin in late August or early September 2009 and continue for a 3-week period. This first effort will largely be focused on removal of subadult lake trout, and will involve the use of professional fisheries consultants. Netting activities will resume in late September/early October and will continue throughout the lake trout spawning period (late November). This later effort will be aimed at removal of the adult spawning lake trout population and will be accomplished largely by agency personnel. This same time line will be used for all three years of the proposed project. As more is learned about the lake trout population in Swan Lake, other techniques may be used to target lake trout during other times of the year.

B. Location

Swan Lake (3,239 acres) is located in the Swan River Valley of northwest Montana. The Swan River is a major tributary to Flathead Lake. Swan Lake historically contained one of the strongest bull trout populations in the entire Columbia River Basin.

C. Authority

Section 87-1-201 (1) of the Montana Code Annotated (MCA) requires Fish, Wildlife & Parks to supervise all wildlife and fish in the state of Montana. The Department may spend money for the protection, preservation, management, and propagation of fish. Section 87-1-201(3), MCA. Montana law requires the department to implement programs that manage species listed as threatened or endangered under the federal Endangered Species Act in a manner that assists in the maintenance or recovery of those species. Section 87-1-201(9), MCA.

D. Need for the Action

The Swan Valley has historically been home to a stable, healthy bull trout population. In 1998, anglers began to occasionally catch adult-sized (20-30-inch) lake trout from Swan Lake and the Swan River. This caused alarm because lake trout are not native and are notorious for rapidly expanding and dominating fish communities in lakes at the expense of bull trout and kokanee salmon. In 2003, the level of concern was compounded when biologists gillnetted a 9-inch juvenile lake trout from Swan Lake during standard low-intensity sampling efforts, indicating that wild reproduction was occurring. A similar survey in 2004 captured 7 more juvenile lake trout. In 2005, biologists captured 28 juvenile lake trout, mostly 9-12 inches long.

In 2006, MSU conducted a six-week series of gill-net surveys on Swan Lake, from mid-September through the last week of October 2006. Single mesh 250-foot gill nets, with 1" bar mesh size (2" stretch) were deployed throughout the lake in order to gather some baseline data and attempt to capture adult lake trout for sonic tag implants to track fish movements. During the six-week period, 28 such net sets resulted in capture of 110 bull trout and 194 lake trout.

During 2007, an effort was made to estimate the population of lake trout in Swan Lake using mark-recapture techniques. Although over 2,000 lake trout were netted with 1,400 marked and released, the resulting population estimate was questionable due to the low number of recaptured lake trout observed. Many possible reasons exist for the low recapture rate of lake trout, including changes in behavior of marked fish, mortality in marked fish, etc. Because confidence in the 2007 estimate was low among biologists, a depletion population estimate was obtained in the fall of 2008. This methodology involved a similar gill netting effort to that of 2007, but relied on removal of lake trout to obtain a depletion rate rather than the mark-recapture method used in 2007. A total of 3,487 lake trout were removed over the 3-week period, and resulted in a population estimate of about 8,800 (95% CI: 7,300-10,500) lake trout between 6.5" and 35.4".

The deployment of gill nets on a large scale has proven effective in capturing large numbers of lake trout for similar research efforts in the Great Lakes area and most recently (2005-2008) in northern Idaho (Lake Pend Oreille and Upper Priest Lake) and in Swan Lake (2007-2008). Because existing equipment (state, federal, and Tribal) is inadequate to efficiently handle large numbers of fish, professional fishery consultants are required.

Understanding the impacts of this newly established population of lake trout, and developing methods of managing the population, requires accurate information on the newly established lake trout population [e.g., population size, population demographics (growth rate, fecundity, etc.) and life history]. This information is important in determining the feasibility and effectiveness of long-term intervention options. Research efforts in 2007 and 2008 accomplished these tasks, and the proposed action represents the next step in evaluating the feasibility of controlling this species. The proposed 3-year effort will facilitate removal of lake trout over a period equal to that required for newly emerged lake trout to fully recruit to the gear used (gill nets). Further evaluation (based on specific criteria) of the success of this action will help guide decisions on any future suppression of lake trout in Swan Lake.

Swan Lake represents a unique learning opportunity with regard to lake trout suppression. Similar removal efforts have been, and continue to be, conducted in other waters with as yet no clear success. Swan Lake differs from other examples because of the early stage of lake trout establishment, the relatively small size and simple bathymetry of the lake, the important native

and sport fisheries have yet to show signs of decline, and there is no established fishery for lake trout. Additionally, thorough baseline data regarding the local fish assemblage has been collected prior to lake trout establishment and will allow scientists to determine if our actions have been effective.

E. Objectives of the Action

The primary objective of the proposed action is to halt expansion of the lake trout population in Swan Lake and begin to cause a downward trajectory in the future growth of the lake trout population. Based on similar examples in Montana and surrounding states, and our collective scientific judgment based on known facts, the unchecked expansion of lake trout in Swan Lake will lead to collapse of the kokanee salmon and bull trout (a federally listed species under the Endangered Species Act) populations. The proposed 3-year effort will provide information to scientists on the feasibility of a suppression program. The knowledge gained will help direct future management of Swan Lake.

F. Relevant Plans, EAs, and Other Documents

- Hazardous Analysis and Critical Control Point (HACCP) Plan for the 2007 and 2008 Swan Lake netting effort: In 2007 and 2008, an HACCP plan was developed for deploying the professional gillnetting vessel from Idaho into Swan Lake. This plan identifies and addresses potential pathways to prevent the movement and spread of Aquatic Nuisance Species (ANS) such as zebra mussels and Eurasian milfoil on equipment.
- 2007 Benefit/Risk Analyses for the Swan Lake Trap Net and Gill Net Survey: The US Fish and Wildlife Service and FWP developed a benefit-risk analysis in 2007 to determine the risks to bull trout. This document proved valuable for estimating the impact of netting operations on bull trout. Bycatch of nontarget species and associated bull trout mortality was lower than expected during both the 2007 and 2008 research efforts.
- Request For Proposals (RFP) for professional fisheries consultants: An RFP is being developed concurrently with this environmental assessment. This document requests proposals from contractors to conduct the gill netting described in this environmental assessment. The RFP has a caveat that any contract developed through the RFP process is contingent on public support and a decision notice for this environmental assessment.
- Environmental Assessment (EA) for Conducting a Depletion Population Estimate for Lake Trout in Swan Lake, Montana: FWP prepared an EA for the work completed in 2008. The EA was released for public comment for a period of 30 days, and a public meeting was held to explain the methods involved in conducting a depletion population estimate. Overall, 12 comments were received, with no comments in opposition to the project.

G. Decisions to be Made

The Decision Maker will determine the following from this EA:

- Determine if proposed alternatives meet the project objectives.
- Determine which proposed alternative should be selected.
- Determine if the selected alternative would cause significant effects to the human environment, requiring the preparation of an environmental impact statement (EIS).

H. Scope and History of this Environmental Analysis

The Swan drainage contains one of Montana's most stable and healthy bull trout populations, as well as important fisheries for kokanee and northern pike. An FWP creel survey conducted in

1995 estimated anglers expended 8,833 days of effort on Swan Lake to harvest 10,670 fish, of which 82% were kokanee, 9% were northern pike, and 5% were bull trout. However, in 1998, anglers began catching and reporting adult sized (20-30-inch) lake trout from Swan Lake and the Swan River upstream of the lake. It is suspected lake trout either ascended the Bigfork Dam fish ladder prior to closure in 1993, or they were illegally introduced into Swan Lake. In 2003, FWP gillnetted a 9-inch juvenile lake trout from Swan Lake during annual monitoring efforts, providing the first evidence of lake trout reproduction in the Swan system, and these numbers have continued to grow. These data led biologists to conclude that lake trout establishment is a growing threat to the bull trout populations in Swan Lake, the Swan River system, and interconnected Lindbergh and Holland Lakes upstream.

These findings served as a catalyst in the formation of a Swan Valley Bull Trout Working Group (SVBTWG) in 2004. The SVBTWG is composed of five government agencies (FWP, USFWS, CSKT, DNRC, USFS) and Montana Trout Unlimited. The SVBTWG determined that, if left unchecked, it is a matter of time until lake trout will become the dominant piscivore (fish predator) in the Swan ecosystem. The SVBTWG was formalized by an MOU in 2005, and in the past three years has made efforts toward evaluating and assessing the lake trout threat.

In recent years, FWP has increased annual spring and fall gill net sampling to improve information about lake trout population structure and distribution. Each year since 2003, fall sampling captured an increasing number of juvenile lake trout. In 2005, biologists netted 28 juvenile lake trout 9-12 inches long. No adult lake trout were captured in gill net sets prior to 2006. This information, along with the capture of very few lake trout as reported by anglers in 2005 or 2006, suggested that populations of adult or subadult lake trout in Swan Lake were low.

Considerable efforts were made to learn more about the newly established lake trout status in Swan Lake. Analysis of these results led the SVBTWG to conclude that more focused research efforts were needed to better characterize the lake trout population status and structure. FWP agreed to support a graduate student project on Swan Lake, using Bonneville Power Administration (BPA) funding as a partial source of support. A plan of work was developed and, in August 2006, a graduate student was selected to conduct the research effort, through the Cooperative Fishery Research Unit at Montana State University. Objectives of the study are to: 1) identify the timing and location of lake trout spawning areas, 2) evaluate alternative gear types as methods of sampling lake trout, 3) estimate the population density and structure of lake trout in Swan Lake, and 4) model various harvest scenarios to estimate effort needed to negatively impact growth of the lake trout population.

MSU conducted a six-week series of gill-net surveys on Swan Lake, from mid-September through the last week of October 2006. Single mesh 250-foot gill nets, with 1" bar mesh size (2" stretch) were deployed throughout the lake basin to gather baseline data and attempt to capture adult lake trout for sonic tag implants. During the six-week period, 28 such net sets resulted in capture of 110 bull trout and 194 lake trout. Bycatch of other species was not accurately monitored, but consisted of about 150 mountain whitefish and several hundred cyprinids (mostly peamouth and northern pikeminnow) and suckers. Only one adult lake trout was captured alive, sonic tagged, and released. PIT (Passive Integrated Transponder) tags were implanted into 101 lake trout that were subsequently released.

The high catch of small lake trout in the fall 2006 gill-net surveys greatly increased the concern of the SVBTWG about the rapidly expanding lake trout population and led to discussions about

how to improve capabilities of the research effort. Simultaneously, USFWS was able to secure funding of approximately \$40,000 to support an effort to develop a lake-wide population estimate of lake trout. The Service contracted with professional fisheries consultants to build and deploy deepwater trap nets and gill nets in Swan Lake in the fall of 2007, with the goal of establishing a lakewide lake trout population estimate.

The fall 2007 fish sampling took place over a 3-week period from September 17-October 4. Short-set gill nets were used to capture live fish for marking and release. Most nets were set in water 80 feet or deeper. The goal of the sampling was to release as many tagged live lake trout as possible, so that a mark-and-recapture population estimate could be achieved. Biologists set a total of 26.5 miles of gill net at various locations around Swan Lake. The nets were checked about every two hours during morning and evening. In addition to gill nets, two deepwater trap nets were set, but caught relatively few fish. The total catch included 2,156 lake trout. Of these, 735 were mortalities, 30 were sonic-tagged, and 1,391 received PIT tags and were released to aid in population estimates.

Although over 2,000 lake trout were sampled during the 2007 effort, the validity of the population estimate was questioned because of inadequate rates of recapture. Many possible reasons exist for not obtaining a more reliable population estimate, including changes in behavior of marked fish, mortality in marked fish, etc. Because of this uncertainty, a population estimate was obtained using depletion methodology in 2008. Netting was again contracted with fisheries consultants and was conducted during the period from September 9-23. Different than in 2007, all lake trout captured during the 3-week period were removed from the system, and the reduction in catch rate was used to obtain the population estimate. A total of 3,487 lake trout were removed over the 3-week period, and resulted in a population estimate of about 8,800 (95% CI: 7,300-10,500) lake trout between 165 and 900 mm. Concomitant with the population estimate, sonic-tag implanted lake trout were tracked during the spawning months (October-November), and accurate locations of spawning concentrations were identified. Gill nets set at the spawning locations resulted in an additional 70 adult lake trout and provided evidence that netting during this time period could be a useful method in targeting the adult component of the lake trout population.

The intent is to use the acquired knowledge to date as a starting point for a 3-year removal effort of lake trout in Swan Lake. Measurable goals and specific success criteria will be used to evaluate the feasibility and effectiveness of alternatives to control expansion of the lake trout population. Based on the results of this assessment and other pertinent information, FWP will consider whether these actions are appropriate or if other changes are warranted in fisheries management of Swan Lake and the lake trout population.

I. Issues Studied in Detail

1. Fish Species (Issue 1)

A 3-year removal effort on lake trout in Swan Lake is expected to reduce the existing number lake trout and cause a downward trajectory in future growth of the population. At this time, fishery scientists from FWP and the partner agencies are in agreement that the observed rate of lake trout expansion cannot be sustained with existing food resources in Swan Lake. Cascading subsequent effects such as probable collapse of kokanee and bull trout populations are considered likely. For that reason, a reduction in the lake trout population is a prudent management approach. In addition, removing or not removing lake trout from Swan Lake is

expected to cause changes in the diversity and abundance of other game and nongame fish species, as well as other aquatic organisms. Netting activities directed at the developing lake trout population will have direct impacts on bull trout, a Threatened Species under the Endangered Species Act, and other fish communities in the lake through bycatch mortality.

2. Threatened and Endangered Species (Issue 2)

Many examples in the West have demonstrated that introduced lake trout negatively impact native bull trout populations. These impacts stem from competition and direct predation. If lake trout are left unchecked, the Swan Lake bull trout population will decline. Bull trout will likely lose or severely reduce their adfluvial migratory life history in the basin, resulting in smaller sizes of adult bull trout. This may further aggravate an existing problem of hybridization and competition with brook trout occurring in many of the bull trout spawning and rearing tributaries. Conducting gill netting to suppress the lake trout population will have unintended impacts to the bull trout population through bycatch-related mortality. Mortality associated with the bycatch of bull trout will be minimized by strictly controlling the timing, depth, and location of net sets and rapid removal and resuscitation of all live bull trout inadvertently captured in the nets, as it was during 2007 and 2008 research efforts. A portion of the bull trout captured will be dead, and these fish will be retained and used for additional research objectives as allowed under existing permitting. Overall, bull trout bycatch mortality during lake trout gill netting will likely be insignificant relative to the direct impacts of lake trout on the bull trout population through competition and predation.

3. Sensitive Species (Issue 3)

Westslope Cutthroat Trout

Westslope cutthroat trout are in low abundance in Swan Lake. Based on experience in nearby Flathead Lake, lake trout will further reduce cutthroat abundance through predation. Netting to reduce abundance of lake trout is unlikely to result in mortality of westslope cutthroat trout, based on the depth and location of net sets, and 2007/2008 research results where no cutthroat were captured in either year.

4. Public Controversy (Issue 4)

The expanding presence of lake trout in Swan Lake has generated substantial concern among fisheries professionals and the public. The proposed actions may cause public controversy. Some groups may argue against removing lake trout; however, others will argue for removal/control of the species to maintain the native and recreational fisheries present in Swan Lake.

J. Issues Eliminated from Further Study

1. Community and Economic Impact

Lake trout impacts to Swan Lake fisheries are likely, but the specifics are unknown. Initially, a robust lake trout population with trophy-sized fish produced as a result of fast growth and abundant kokanee forage would likely be attractive to anglers. However, in many similar situations, after a large lake trout population becomes established, it will likely reduce or eliminate kokanee salmon and bull trout populations. The resulting fishery is likely to become similar to those found in Whitefish Lake or Lake McDonald where the large lake trout rapidly disappear from the population. This may change angler use of Swan Lake and indirectly cause economic changes in the community. However, the established lake trout population may offset changes in angler use related to declines in bull trout and kokanee salmon fisheries, at least so long as a lake trout population with diverse size classes is maintained. The proposed 3-year effort

will reduce the lake trout population, thus, delaying changes in other fisheries, but the effect on lake trout will likely be short term. Long-term solutions to issues related to community impacts of lake trout on fishing opportunities and fishing economics will continue to be evaluated.

2. Effects on Other Wildlife

Conducting netting activities on a water body may temporarily change behavior of some wildlife species (e.g., bald eagles); however, no negative consequences are anticipated for conducting such activities. Occasionally, fish eating birds are captured in gill nets, but in this situation the nets will be fished in 80 foot and deeper waters where the likelihood of catching such species is very unlikely. To date, no birds or mammals have been captured in nets.

K. Applicable Permits, Licenses, and Other Consultation Requirements 1. Permits

Any alternative selected that requires handling of fish will require consultation with the US Fish and Wildlife Service to determine relative impacts to bull trout, a Threatened Species under the Endangered Species Act. At the conclusion of this evaluation, the US Fish and Wildlife Service will incorporate any additional bull trout incidental take under the existing Section 6 permit authorized by the Endangered Species Act.

2. Consultation Requirements

Any alternative selected that requires bringing in a fishing boat from out of state will require consultation with FWP's Aquatic Nuisance Species Coordinator. Through this consultation a Hazardous Analysis and Critical Control Point (HACCP) plan will be developed to prevent the introduction and spread of Aquatic Nuisance Species (e.g., zebra mussels, New Zealand mudsnails, and vegetation).

L. Why an EA is Appropriate Level of Review

Based on an evaluation of impacts to the physical and human environment under MEPA, this environmental review revealed only one noteworthy potential negative impact (public controversy) that could not be mitigated from the proposed action. Removing fish species from a water body is not a new or unusual FWP action, it will not set a precedent, and it will not conflict with local, state, or federal laws or formal plans. Due to these factors, an EIS is not necessary and an environmental assessment is the appropriate level of analysis. A narrative EA was performed because this action may generate public controversy, the action has potentially noteworthy impacts that can be mitigated, and FWP wants to walk the public through the entire decision-making process.

2.0 Alternatives Including the Proposed Action

A. Introduction

The purpose of Chapter 2 is to describe and compare the alternatives by summarizing the environmental consequences. This chapter describes the activities of the no-action alternative and all action alternatives. However, information that is more detailed can be found in Chapters 3 and 4. This chapter presents the predicted attainment of project objectives and the predicted effects of all alternatives on the quality of the human environment in comparative form, providing a basis for choice among the options for the Decision Maker and the public.

FWP and partners have developed two possible alternatives. The alternatives are 1) the noaction alternative, and 2) a multifaceted removal approach targeting both subadult and adult lake trout.

B. Description of Alternatives

1. Alternative A: No-Action Alternative

a. Principal Actions of Alternative A

Under Alternative A, the no-action alternative, no lake trout would be removed from Swan Lake other than those taken by anglers. The number of lake trout in Swan Lake would not be reduced, and the population would likely continue to increase. Under this alternative, FWP will continue annual monitoring of the fish community in Swan Lake. This monitoring will provide relative abundance information that can be used to detect trends in fish populations through time. However, trends detected by this method are often retrospective and may provide insufficient data to forestall major and perhaps irreversible changes in the fish community. This alternative will result in limited abilities to determine effectiveness and feasibility of future lake trout management alternatives.

b. Past and Present Relevant Actions

FWP has developed a database of historic netting and invertebrate sampling information. This information will be valuable in interpreting changes in the Swan Lake aquatic community through time.

c. Reasonably Foreseeable Relevant Actions Not Part of the Proposed Action

The lake trout population in Swan Lake will continue to grow, thereby competing with and predating on native bull trout and the recreationally important kokanee salmon and northern pike populations. Through time, anglers will lose the ability to fish for bull trout, and opportunities for kokanee fishing will be diminished. It is also likely that as the fish community is altered, the loss of kokanee forage will reduce the growth rate of lake trout and bull trout and minimize the ultimate numbers of trophy-sized fish of both species. Due to these changes, it is anticipated public demand for active management of the lake trout population will eventually increase as the growth rates and sizes of the lake trout inevitably will decrease.

2. Alternative B: Removal of Subadult and Adult Lake Trout – Proposed Action

A 3-year removal effort aimed at both subadult and adult lake trout in Swan Lake will provide information regarding the efficiency and potential success of a lake trout removal program. Additionally, reducing lake trout numbers will delay effects to kokanee and bull trout associated with lake trout predation and competition. Removal of the subadult lake trout using large-scale netting operations will influence the number of lake trout that attain both the size in which they

prey upon kokanee and bull trout and the age in which they reach sexual maturity. Efforts aimed at the adult, spawning population of lake trout will directly affect lake trout recruitment by removing mature fish before and during egg deposition. Measurable goals and specific success criteria will be used to evaluate the efficacy of these actions and will be assessed on an annual basis. Through this evaluation process, methods may be adjusted to improve efficiency, and plans for future management may be developed. Some lake trout control projects in the Western United States have failed to establish solid baseline information; thus, the programs have struggled to show progress, and in some cases it is unknown what level of effort is required to achieve the desired lake trout population levels. Baseline population information for Swan Lake has been recorded to date and will continue to be collected as the project progresses. This will allow scientists to determine appropriate levels of needed effort and future costs associated with containment of lake trout expansion.

a. Principal Actions of Alternative B

The principal actions involved in this multifaceted removal approach are: to enlist the services of professional fishery consultants and their equipment, conduct intensive gill netting over a 3-week period (late August-September), conduct gill netting over spawning lake trout (late October-November), cull collected lake trout, record biological information (size, aging structures, genetic samples, etc.) from the culled lake trout, field dress salvageable culled lake trout, and distribute them to the public for consumption (i.e., food banks). Based on previous netting efforts, we anticipate an initial removal of 3,000 to 5,000 lake trout per year in Swan Lake under Alternative B, with the potential for diminishing numbers in out years as the project succeeds.

b. Mitigation and Monitoring

Bull trout and other fish species bycatch mortality will be mitigated by using short-duration gill net sets, netting during periods when spawning bull trout are out of the lake in upstream spawning areas, using deep net sets, and avoiding areas with known high catch rates of bull trout while maximizing lake trout catch. Bull trout population monitoring (annual redd counts and trend netting) in addition to aquatic community monitoring (fish and invertebrates) will be continued to evaluate the effects of the lake trout population on the aquatic community and to provide information to evaluate the effectiveness of control operations.

c. Evaluation Criteria

Defining the success of this project can be potentially difficult. Currently, eradication of the lake trout population in the Swan drainage is not feasible, given existing control methods available. However, removing a significant portion of the lake trout population annually may help maintain a relatively low lake trout density and would likely result in reduced impacts to the bull trout and kokanee populations. The goal of this 3-year population control program is to reduce the density of lake trout to a point in which rapid population expansion is not occurring. Evaluation criteria designed to determine the relative effectiveness of this project includes the following:

1. Fisheries literature suggests that total annual mortality in excess of 50% has led to the collapse of lake trout fisheries in other regions. However, there is uncertainty, under circumstances for optimal population growth such as Swan Lake currently provides, whether an overfished lake trout population will collapse. Using this as a guideline, we propose to exert a level of effort that would result in at least 50% total annual mortality for three years, on both the subadult and adult components of the Swan Lake lake trout population. Based on results of the 2008 depletion population estimate, total fishing effort would require the removal of at least 4,850 fish (between 165-900 mm) to reach the

- mortality rate target in 2009, assuming no additional removal by anglers or by natural mortality. New estimates, based on annual recruitment, would need to be calculated annually, but similar levels of effort will be required in 2010 and 2011. Additionally, netting aimed directly at the adult component of the population will be similarly evaluated by examining the number of radio-tagged fish captured during the spawning months (October-November). Success of this portion of the netting will also require removal of at least 50% of the adult fish.
- 2. Determining whether the 50% annual mortality is sufficient will be an important facet of this project. The intent of this level of effort is to reduce the lake trout population to a point in which negative effects to bull trout and kokanee are minimized. Therefore, trend data associated with the lake trout population will be assessed through several metrics. Lake trout catch per unit effort (CPUE) during both the lake-wide netting, as well as the focused spawner netting, will be monitored annually. Additionally, lake trout relative weights and average length of spawning fish will also be monitored to detect changes associated with our actions. If our efforts are successful, lake trout CPUE should decline. Relative weights of lake trout should also remain stable or increase, and average length of spawning fish should decrease, other indicators signifying a reduction in larger, older fish. Another lake-wide population estimate will be conducted at the conclusion of this 3-year effort to determine if the removal target translated into a significant reduction in lake trout abundance.
- 3. Maintaining stable fisheries for bull trout and kokanee is the ultimate goal for this project. Therefore, detecting trends in both the fish populations and the forage base they depend on will also determine the effectiveness of our actions. Bull trout will continue to be monitored through annual redd counts, juvenile estimates in index spawning tributaries, and through CPUE of both routine spring gill-net samples, as well as during the lake-wide netting conducted by professional fisheries consultants. Kokanee numbers will continue to be monitored through annual redd counts, which have been conducted since 1987, as well as through CPUE in routine spring gill-net sampling. Mysis shrimp represent a considerable forage base for juvenile bull and lake trout and, to a lesser degree, provide forage for kokanee. Mysis densities have been monitored in Swan Lake since 1983, and will continue to be collected at standardized times and locations. Although the 3-year time period of this project may be insufficient to detect increases in any of these indices, substantial declines could be an indicator that lake trout removal efforts are not effective enough.

Detecting changes in any one of the three aforementioned evaluation criteria may or may not provide conclusive evidence with regard to our removal efforts. However, if the suite of indices all conclude that our efforts have been successful, the results would lend credence to the thought that our actions are appropriate. Evaluation criteria Numbers 1 and 2 represent the highest priority for this 3-year project in determining the feasibility of suppressing lake trout. If these objectives are satisfied, it is likely that risks to other fish species will be minimized. At the end of this 3-year suppression program, we will be better informed to make decisions on the efficacy and feasibility of controlling lake trout populations in Swan Lake with gill nets. Although spawner netting could occur every year beyond this point, it is hoped that large scale netting operations would likely not be required unless the lake trout population showed signs of rapid expansion. However, it should also be noted that a continuation of these efforts would also be dependent upon successful acquisition of long-term funding.

d. Past and Present Relevant Actions

FWP has developed a database of historic netting information. This information will be valuable in interpreting changes in the Swan Lake fish community through time.

C. Process Used to Develop the Alternatives

1. History and Development Process of Alternatives

A limited number of possibilities exist to remove undesirable fish species in lake environments. These techniques include, but are not limited to: mechanical removal (i.e., netting, manipulating water levels, installation of barriers, etc.), chemical treatment, angling harvest, and biological control (examples include the use of predatory fish). These techniques all have benefits and drawbacks, and must be selected on a case-by-case basis for specific water bodies.

2. Alternatives Eliminated from Detailed Study

Fish removal projects utilizing fish toxicants have been conducted extensively in the western United States. These approaches have proven successful in many cases. However, given the robust population of bull trout existing in Swan Lake, this alternative is not feasible or prudent at this time. Similarly, the use of biological controls, such as the introduction of predatory fish, is not being considered because of the unknown consequences to bull trout and other native fish species occupying Swan Lake.

D. Summary of Comparison of the Activities, the Predicted Achievement of the Project Objectives, and the Predicted Environmental Effects of All Alternatives

1. Summary Comparison of Project Activities

Comparisons of the project activities under the two alternatives are to simply conduct a multifaceted removal of lake trout (Alternative B) or do not remove lake trout (Alternative A).

2. Summary Comparison of Predicted Achievement of Project Objectives

The primary objective of this project is to remove lake trout from Swan Lake. The no-action alternative will not satisfy this objective. This will limit the ability to determine the feasibility and efficacy of lake trout control options and will not result in a reduction of lake trout in Swan Lake. Under Alternative A the lake trout will continue to expand and establish, but under Alternative B, removing many lake trout from the population will likely minimize the impacts of lake trout to the existing aquatic community. Alternative B may also buy more time to identify and evaluate additional actions to manage the lake trout population.

3. Summary Comparison of Predicted Environmental Effects

FWP predicts that Alternative A will not have any direct or immediate environmental effects. However, Alternative A may have significant long-term environmental consequences (e.g., reduction in bull trout and other species, potential loss of forage for fish-eating birds and other wildlife) and indirect effects in not providing the information needed to evaluate the effectiveness and feasibility of control actions.

FWP predicts that Alternative B will have direct and immediate environmental effects in the Swan Lake aquatic ecosystem. Alternative B will remove many lake trout from Swan Lake, thereby minimizing the impact (in the short-term) of those lake trout on the aquatic community.

In addition, Alternative B will provide information that is invaluable for determining the feasibility and efficacy of long-term lake trout population control options. Alternative B will also have direct impacts on the bull trout population in Swan Lake through bycatch mortality. However, this mortality can be mitigated by using short duration gill net sets, rapidly resuscitating and releasing live fish, netting during periods when spawning bull trout are out of the lake in spawning areas, and avoiding areas and depths with known high catch rates of bull trout. During the 2007 research project, estimated bull trout mortality was a maximum of 179 fish. Bull trout mortality associated with 2008 research efforts was 140 fish. A similar effort is proposed for the 3-year removal project and, coupled with an increased knowledge of likely bycatch locations, direct mortality to bull trout should be similar to previous efforts. The bycatch mortality associated with this project will likely be minor in comparison to the direct effect of lake trout on Swan Lake bull trout. The estimated bull trout bycatch mortality falls within the acceptable range for the benefit/risk analysis for the 2007 netting operation.

Other fish species will be directly affected through bycatch mortality. However, based on previous experience, the number of species and number of fish killed will be low. For example, in 2007, only 8 other species (other than lake trout and bull trout) were collected. Netting efforts in 2008 produced similar results with regard to bycatch. The following table summarizes overall catch by species for the 2007 and 2008 netting efforts and also demonstrates the selectivity of the gear for lake trout. Mortality for other species was not determined; however, based on observations upon release and mortality rates for lake trout and bull trout, the mortality rate was low (typically 20-40% of fish captured would not be expected to survive, with some species more sensitive than others).

Species	# Captured 2007	# Captured 2008
Lake Trout	2174	3784
Bull Trout	378	240
Northern Pikeminnow	200	100
Longnose Sucker	187	127
Largescale Sucker	25	5
Mountain Whitefish	32	9
Kokanee Salmon	39	96
Yellow Perch	1	0
Peamouth	1	10
Northern Pike	1	0

3.0 Affected Environment

A. Introduction

Chapter 3, Affected Environment, identifies and describes those resources that are affected by the proposed action and is organized by general resource categories and their associated issues. It does not describe any effects of the alternatives, as these will be covered in Chapter 4. The descriptions of the existing environment found in this chapter can be used as a baseline for comparison in Chapter 4.

1. General Description and Location of Swan Lake

Swan Lake (3,239 acres) is located in the Swan River Valley of northwest Montana. The Swan drainage forms a major tributary to Flathead Lake. Swan Lake historically contained one of the strongest bull trout populations in the entire Columbia River Basin.

B. Description of Relevant Affected Resources

1. Issue 1 - Fish Species

A variety of native and nonnative fish species are present in Swan Lake and its tributaries. Bull trout, westslope cutthroat trout, mountain whitefish, pygmy whitefish, sculpin, northern pikeminnow, peamouth, longnose sucker, and largescale sucker comprise the native fish species in the basin. Nonnative fish species present in the system are lake trout, rainbow trout, kokanee salmon, brook trout, northern pike, yellow perch, largemouth bass, lake whitefish, brook stickleback, central mudminnow, and pumpkinseed. Swan Lake bull trout populations have long been one of the most robust populations remaining in the historic distribution in the United States. Due to the historic strength and stability of the Swan Lake bull trout population, the opportunity for anglers to harvest bull trout in Swan Lake has been maintained. Harvesting bull trout is a unique opportunity for anglers, given the status of bull trout as a Threatened Species under the Endangered Species Act. A substantial fishery exists in Swan Lake for kokanee salmon. In fact, creel surveys conducted in 1984 and 1995 indicated that kokanee salmon were the most targeted fish species, followed by northern pike, and bull trout. Over the past ten years, angler effort on Swan Lake has varied from 5,865(±925) to 12,716(±1,896) angler days. The presence of many nonnative fish poses threats to native fisheries. Aside from competing with native salmonids, brook trout hybridize with bull trout. Brook trout also directly predate on some native salmonids. Lake trout threaten native salmonid populations through competition and predation.

2. Issue 2 - Threatened and Endangered Species

Bull trout - a threatened species under the Endangered Species Act - are present in Swan Lake and associated tributaries. Bull trout in the Swan Lake basin primarily exhibit an adfluvial life-history strategy. Under this life-history strategy, adult bull trout reside primarily in Swan Lake. Adult bull trout utilize Swan Lake tributaries for spawning, which occurs in September and October. Juvenile bull trout typically rear for 2 or more years in Swan Lake tributaries before migrating to Swan Lake to mature. Thus, at any given time the bull trout population in Swan Lake is comprised mostly of nonspawning adults and subadult fish. Spawning adults move seasonally in and out of the lake environment.

3. Issue 3 - Sensitive Species

Westslope cutthroat trout are a sensitive species that are present in Swan Lake. Historically, westslope cutthroat trout were the only other trout species present (other than bull trout) in the Swan Lake system. The establishment of rainbow trout and brook trout throughout the Swan Lake basin has impacted westslope cutthroat trout. Rainbow trout readily hybridize with westslope cutthroat trout. Since 1975, FWP has stocked hatchery westslope cutthroat trout into Swan Lake. However, due to the current lake trout situation and low rates of return, that stocking program was suspended starting in 2008. Although no genetic data are available, hybridized westslope cutthroat trout and rainbow trout are likely present in Swan Lake. Brook trout established throughout the Swan Lake basin compete and predate on westslope cutthroat trout.

4. Issue 4 - Public Controversy

Nonnative fisheries impacts on native fisheries and fish removal projects often generate public controversy. Typically, public controversy related to fish removal projects centers around the use of fish toxicants, which is not the strategy in the proposed project. A growing segment of the public want to see the impacts of nonnative fish on native fish communities mitigated to prevent declines and extirpation of native species. To date, this has been the case with lake trout in Swan Lake. On the other side of the issue, anglers often resist nonnative removal programs due to the fact that they enjoy angling for the targeted species. Trophy lake trout are in demand, but many other lake trout fishing alternatives exist in the Flathead Valley. Overall, the potential exists for public controversy over decisions of this EA and future actions to manage lake trout in Swan Lake, but thus far in past scoping meetings and from press highlighting this project, little or no controversy has surfaced.

4.0 Environmental Consequences

A. Introduction

Chapter 4 describes the environmental effects of each alternative on the resources described in Chapter 3 and contains scientific and analytic basis for the alternatives comparison summarized in Chapter 2. It is organized in the same manner as Chapter 3 by general resource categories and their associated issues.

B. Predicted Attainment of the Project Objective for all Alternatives

- 1. Predicted Attainment of the Project Objective
- a. Alternative A: No Action

The no-action alternative will not satisfy the objective of reducing the lake trout population in Swan Lake. In addition, information regarding the feasibility and efficacy of lake trout population control methods will not be obtained. The lack of this information will make identifying future control alternatives and evaluating their success difficult, if not impossible.

b. Alternative B, Removal of Subadult and Adult Lake Trout

A multifaceted removal of lake trout in Swan Lake will provide the best information possible on the feasibility and efficacy of management options for the newly formed population of lake trout. This information will be invaluable in identifying potential control alternatives. Concomitant with this information, Alternative B will also result in a reduction of lake trout numbers in Swan Lake. The proposed project will likely result in 3,000-5,000 lake trout being removed in 2009. If the project is fully successful, numbers of lake trout removed will likely diminish with the decreasing population in out-years (assuming constant effort).

C. Predicted Effects on Relevant Affected Resources of All Alternatives

- 1. Predicted Effects on Fish Species (Issue 1)
- a. Effects of Alternative A: No Action on Issue 1 Fish Species
- Direct Effects The no-action alternative would not have any direct or immediate effects on fish and wildlife, given that no action would take place.
- Indirect Effects The no-action alternative would have indirect effects on the fish community in Swan Lake. If no action is taken, data required to identify lake trout control options and evaluate their feasibility and effectiveness will not be obtained. Further, the No- Action Alternative will not result in removal of lake trout from Swan Lake during the period from 2009-2011. By not removing lake trout from Swan Lake, lake trout will likely further expand, thereby making future options for coping with the lake trout population expansion or restoring lost species complexes less effective. Not taking advantage of the early stage of the lake trout population establishment in Swan Lake may ultimately have significant negative consequences for bull trout and kokanee salmon fisheries in Swan Lake. There is some concern that undocumented changes in the fish community may already be underway.
- Cumulative Effects The indirect effects of Alternative A on the fish community in Swan Lake may cause cumulative and indirect effects on the wildlife community. Fish available to be eaten by eagles, loons, ospreys, mink, otters, and other wildlife may be reduced. Fish species that are surface-oriented or which may spawn upstream in the Swan River, thus making them more available to predators (e.g., kokanee, mountain whitefish, cutthroat, and

bull trout), will be partially or completely replaced by the more benthic-oriented and non-migratory, lake-dwelling lake trout that are largely unavailable to terrestrial predators.

b. Effects of Alternative B: Removal of Subadult and Adult Lake Trout on Issue 1 - Fish Species

- Direct Effects A multifaceted removal of lake trout in Swan Lake will directly reduce the lake trout population. Incidental bycatch mortality will also directly affect other fish species that reside in Swan Lake.
- Indirect Effects Reducing the lake trout population in Swan Lake will have indirect effects on the remaining aquatic community in Swan Lake. A reduced population of lake trout will help to prevent negative impacts to bull trout, kokanee salmon, and other aquatic organisms in Swan Lake.
- Cumulative Effects Netting aimed at reducing the lake trout population in Swan Lake may
 have cumulative effects on bull trout through incidental bycatch occurring annually.
 However, as seen in previous years, bycatch remains lower than expected and is likely not
 enough to have a population level effect.

2. Predicted Effects on Threatened and Endangered Species (Issue 2)

a. Effects of Alternative A: No Action on Issue 2 - Threatened and Endangered Species

- Direct Effects The no-action alternative will not have direct impacts on threatened or endangered species, as no action will take place.
- Indirect Effects The no-action alternative will have indirect effects on threatened and endangered species. Specifically, not obtaining adequate information to evaluate control options for the lake trout population will limit the ability to manage lake trout. Therefore, there is a high likelihood bull trout will be affected through predation and competition with lake trout. In addition, the no-action alternative will not result in a reduction in the lake trout population. By not reducing the number of lake trout, the population may further expand, thereby limiting control options and the efficacy of future alternatives. If the lake trout population becomes more established, the interactions (competition and predation) between bull trout and lake trout will increase, which will negatively affect the bull trout population.
- Cumulative Effects if the no-action alternative is chosen, continued expansion of lake trout in Swan Lake could be expected. As this occurs, lake trout may spread throughout the system, having similar negative impacts on the Swan River system and Holland and Lindbergh Lakes. All of these water bodies contain important bull trout populations. Cumulative impacts to bull trout throughout the Swan River Basin may further threaten this native species. Lake trout may also move downstream into Flathead Lake, adding to the lake trout population and exacerbating native species management issues in that water body.

b. Effects of Alternative B: Removal of Subadult and Adult Lake Trout on Issue 2 - Threatened and Endangered Species

Direct Effects - A multifaceted removal of lake trout in Swan Lake will directly affect bull trout, a threatened species under the Endangered Species Act, through bycatch mortality. Estimated mortality for bull trout will likely be similar to netting efforts conducted in 2007 (141 fish) and 2008 (120 fish). Conducting short-term gill net sets, avoiding areas with high bull trout catch rates, and careful handling and release of collected live bull trout would help

- mitigate mortality of bull trout. The USFWS will provide coverage for incidental take of bull trout through Section 6 of the Endangered Species Act.
- Indirect Effects A multifaceted removal of lake trout in Swan Lake will have positive indirect effects on bull trout. Based on previous netting efforts, an estimated 3,000 to 5,000 lake trout will be removed annually from Swan Lake. This will reduce the impacts of lake trout (predation and competition) on bull trout.
- Cumulative Effects Netting aimed at reducing the lake trout population in Swan Lake may have cumulative effects on bull trout through incidental bycatch occurring annually.
 However, as seen in previous years, bycatch remains lower than expected, and is likely not enough to have a population level effect.

3. Predicted Effects on Sensitive Species (Issue 3)

a. Effects of Alternative A: No Action on Issue 3 - Sensitive Species, Westslope Cutthroat Trout

- Direct Effects None.
- Indirect Effects Selecting the no-action alternative will not result in an immediate reduction of the lake trout population in Swan Lake. As a result, lake trout predation rates on westslope cutthroat trout will not be reduced and will begin to increase as new cohorts of lake trout are produced. The westslope cutthroat trout stocking program has already been eliminated and further negative effects on angler opportunity to catch westslope cutthroat trout can be anticipated in the lake and the Swan River.
- Cumulative Effects None.

b. Effects of Alternative B: Removal of Subadult and Adult Lake Trout on Issue 3 - Sensitive Species, Westslope Cutthroat Trout

- Direct Effects A multifaceted removal of lake trout in Swan Lake may have direct effects on westslope cutthroat trout through bycatch mortality; however, it is likely that any bycatch mortality would be extremely low (<10 fish). Netting efforts in 2007 and 2008 did not capture any westslope cutthroat trout.
- Indirect Effects A multifaceted removal of lake trout in Swan Lake will cause a direct reduction in the lake trout population, thereby indirectly reducing predation from lake trout on westslope cutthroat trout.
- Cumulative Effects None.

4. Predicted Effects on Public Controversy (Issue 4)

a. Effects of Alternative A: No Action on Issue 4 - Public Controversy

- Direct Effects The no-action alternative may have direct effects on public controversy by not satisfying the objective of the project.
- Indirect Effects Indirectly, the no-action alternative may lead to public controversy if lake trout numbers are not reduced and lake trout begin to cause population level effects on kokanee salmon and bull trout populations (among other fish species and invertebrates).
 Reductions in kokanee salmon and bull trout populations will indirectly affect established and traditional angling opportunities.
- Cumulative Effects The no-action alternative is likely to affect characteristics of the fishery in the Swan River system as fish community changes occur. Continued expansion of lake

trout in the Swan Lake system may eventually lead to the establishment of lake trout in Lindbergh and Holland Lakes and expansion in the Swan River system.

b. Effects of Alternative B: Removal of Subadult and Adult Lake Trout on Issue 4 - Public Controversy

- Direct Effects A large netting effort of lake trout in Swan Lake may directly cause public controversy over the removal of lake trout. Fish removal projects have in the past caused public controversy, mainly over the use of fish toxicants; however, fish toxicants are not being used under any alternative in Swan Lake. Misinformation on this project will be minimized through educational opportunities and public meetings.
- Indirect Effects Some anglers may be temporarily disrupted, precluded from fishing in certain locations, or disturbed by sampling activities. However, because of the timing of this project (late summer, with activities conducted mostly in predawn or postdarkness hours) and the short duration, such effects will be minimal.
- Cumulative Effects None.

D. Relationship of Short-term Uses and Long-term Productivity (on all resources)

1. No-Action Alternative

Under the no-action alternative, the short-term ability to effectively identify and evaluate control options for the lake trout population in Swan Lake will be considerably reduced, if not completely lost. In a long-term perspective, because the no-action alternative will not result in a reduction of lake trout numbers, the ability to address the lake trout population at an early stage of establishment may be lost. If the larger cohorts of young lake trout reach sexual maturity before any control measures are implemented, the population may exhibit an exponential growth phase, after which growth and condition of lake trout (and perhaps other species such as bull trout) are likely to decline and the feasibility of control measures are severely reduced. This course of events will likely result in loss of the existing multispecies fishery and will dramatically increase the difficulty of reestablishing it.

2. Removal of Subadult and Adult Lake Trout

Under the multifaceted removal alternative, the objectives of the project will be satisfied. First and foremost, adequate information will be obtained to evaluate control options for lake trout in Swan Lake. Based on other lake trout control projects in the West, this information will be invaluable. Secondly, this removal effort will have an immediate impact on the size of the lake trout population, reducing it by an estimated 3,000 to 5,000 fish annually. This may have significant long-term benefits by preventing the lake trout from reaching a point of exponential population growth, where the feasibility of population control is reduced. It is unlikely that complete lake trout removal from Swan Lake can ever be accomplished.

E. Any Other Disclosures

Although other nonnative species currently exist in Swan Lake (e.g., northern pike), FWP and partners have no intention to pursue removal of these species, as they do not present the same threats to bull trout populations and have coexisted for several decades. Furthermore, previous sampling efforts have shown that other species are not selected by deepwater gill netting.

5.0 Identification, Rationale, and Recommendation for Preferred Project Alternative

A. Introduction

In this chapter, the preferred project alternative is identified and recommended with the supporting rationale.

B. Identification and Rationale for Preferred Alternative

1. Preferred Alternative

The preferred alternative is the removal of subadult and adult lake trout alternative.

2. Support Rationale

a. Environmental Protection Rationale

Although the preferred alternative will cause some direct impacts to bull trout, minimal numbers of westslope cutthroat trout, and other fish species through bycatch mortality, and may result in public concern, it will provide for identification and evaluation of long-term management approaches for lake trout in Swan Lake. Developing capability to effectively control the lake trout population in Swan Lake will mitigate future lake trout impacts on these same species and issues. It will also reduce the chances that lake trout will spread upstream into Holland and Lindbergh lakes as well as migrate downstream into Flathead Lake. Based on situations similar to Swan Lake, if lake trout are not effectively controlled, the impacts to native species and important sport fisheries will be far more severe than any bycatch mortality resulting from this netting project.

b. Project Objectives Rationale

The preferred alternative will satisfy the objectives identified.

C. Monitoring Commitments

FWP will continue monitoring fish populations in Swan Lake using standard procedures and equipment.

6.0 Public Participation

The public will be notified in the following ways to comment on the draft EA for the Swan Lake Experimental Lake Trout Removal Project:

- Legal notices will be published in the Kalispell Daily Inter Lake, the Seeley/Swan Pathfinder, the Great Falls Tribune, the Missoulian, and Helena Independent Record. News releases will be given to the same newspapers and other media outlets.
- Legal notice and the draft EA will be posted on the FWP web site: http://fwp.mt.gov/publications.
- Draft EAs will be available at the FWP Region 1 Headquarters in Kalispell and the FWP State Headquarters in Helena.

This level of public involvement is appropriate for a project of this scale.

The following is a list of agencies consulted in preparation of this EA:

- U.S. Fish and Wildlife Service, Montana Field Office, Creston
- Montana Fish, Wildlife & Parks, Wildlife Division, Kalispell
- U.S. Forest Service, Flathead National Forest

Duration of comment period, if any:

The public comment period will be through Wednesday, July 8, 2009. A public meeting is scheduled for Wednesday, July 1, 7:00-9:00 p.m. at the US Forest Service Office, 200 Ranger Station Road, Bigfork, Montana. Comments may be e-mailed to lrosenthal@mt.gov or written comments may be sent to the following address:

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7.0 List of Individuals Associated With the Project

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